



# LED-TV

Chassis: U59A

Model : UN32D4000ND

UN32D4010ND

# *SERVICE* Manual

## TFT-LCD TV



Front Design : ToC Charcoal Black      Stand : Square

UN32D4000ND

## Contents

1. Precautions
2. Product specifications
3. Disassembly and Reassembly
4. Troubleshooting
5. Wiring Diagram

# Contents

<b>1. Precautions .....</b>	<b>1-1</b>
1-1. Safety Precautions .....	1-1
1-2. Servicing Precautions .....	1-2
1-3. Electrostatically Sensitive Devices (ESD) Precautions .....	1-2
1-4. Installation Precautions .....	1-3
<b>2. Product specifications .....</b>	<b>2-1</b>
2-1. Specifications .....	2-1
2-2. Detail Factory Option .....	2-4
2-3. New Features explanation .....	2-5
2-4. Accessories .....	2-14
<b>3. Disassembly and Reassembly .....</b>	<b>3-1</b>
3-1. Disassembly and Reassembly .....	3-1
<b>4. Troubleshooting .....</b>	<b>4-1</b>
4-1. Troubleshooting .....	4-1
4-2. Factory Mode Adjustments .....	4-25
4-3. White Balance - Calibration .....	4-37
4-4. White Ratio (Balance) Adjustment .....	4-39
4-5. RS-232C .....	4-40
4-6. AV control code .....	4-41
4-7. Software Upgrade .....	4-46
4-8. Rear Cover Dimension .....	4-49
<b>5. Wiring Diagram .....</b>	<b>5-1</b>
5-1. Wiring Diagram .....	5-1
5-2. Position of Connector .....	5-2
5-3. Connector Functions .....	5-5
5-4. Cables .....	5-5



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### 3. Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the LED TV.

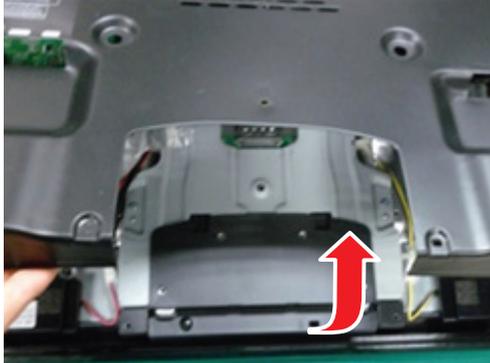
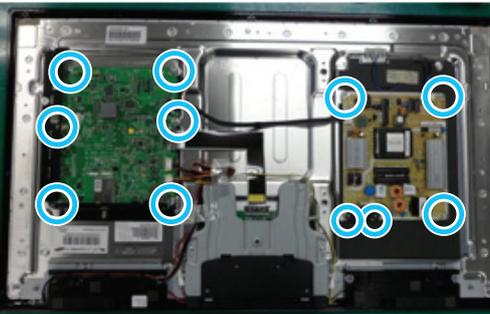
**⚠ WARNING:** This LED TV contains electrostatically sensitive devices. Use caution when handling these components.

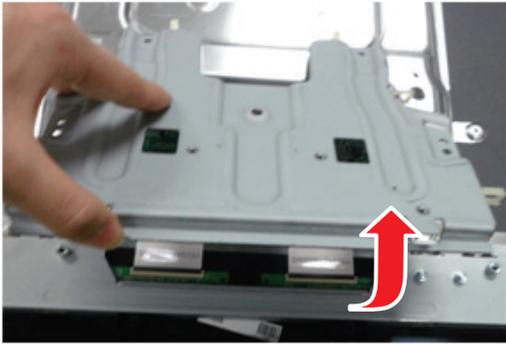
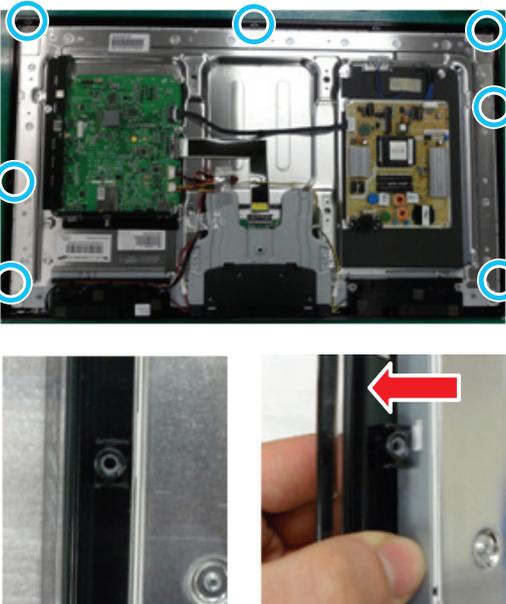
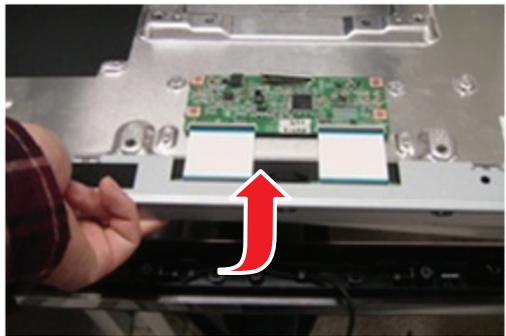
#### 3-1. Disassembly and Reassembly

**⚠ Cautions:** 1. Disconnect the LED TV from the power source before disassembly.  
2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.

Description	Picture Description	Screws
<p><b>1</b> Place TV face down on cushioned table. Remove screws from the Stand. Remove stand.</p>		 6001-002621
<p><b>2</b> Remove the 13 screws of rear-cover.</p>		 6003-001782   6001-002671

3. Disassembly and Reassembly

Description	Picture Description	Screws
<p><b>3</b> Lift up the rear-cover.</p>		
<p><b>4</b> Remove the left and right speaker.</p>		
<p><b>5</b> Remove the 4 screws of main board and 3 screws of IP board.</p>		 6001-002653
<p><b>6</b> Remove the 2 screws of stand link cover.</p>		 6003-001782
<p><b>7</b> Remove the 4 screws of stand link.</p>		 6001-002653

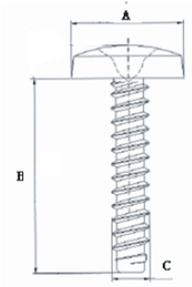
Description	Picture Description	Screws
8 Lift up the stand link.		
9 Detach the front hook.		 6001-002653
10 Lift up the panel.		

※ Reassembly procedures are in the reverse order of disassembly procedures.

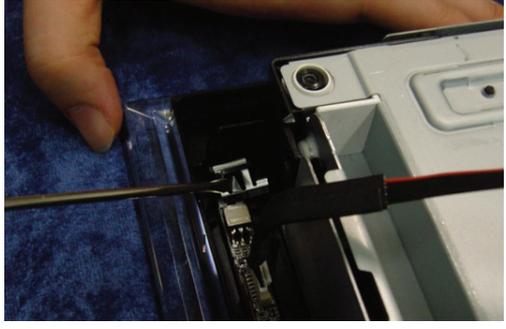
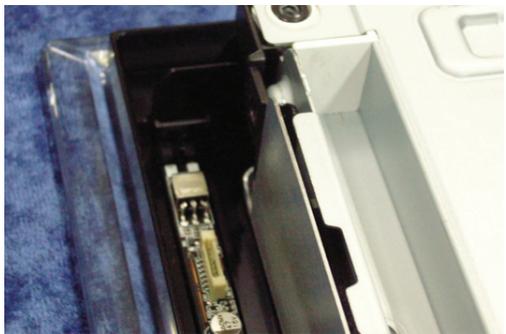
### 3. Disassembly and Reassembly

#### Screw Size

Code No.	A (mm)	B (mm)	C (mm)	Q'ty
6001-002621	7.8~8.3	7.4~8.0	7.4~8.0	4EA
6001-001782				11EA
6001-002671				32" 2EA
6001-002670				15EA
6003-001782	7.8~8.2	11.4~12.0	3.8~3.9	2EA



## ■ How to disassembly Function & IR ASSY

Description	Picture Description	Screws
1	Check the 2 Function Clips.	
2	Remove the 2 Function Clips.	 
3	Heat the Function Assy by Heat Gun and Lift up the Function Assy.	

Control the sensitivity of function key is available in Factory mode

Option	Sub Option	KEY SENSITIVITY
Control		FUNCTION KEY
SVC		
Expert		
ADC/WB		
Advanced		

### KEY SENSITIVITY

**Default : 38**

- 1~254, Not Used
- Raising this value, the sensitivity decreases
- Not Used : Not use sensitivity, use Function default value

# 1. Precautions

## 1-1. Safety Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

### 1-1-1. Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power and DC power jack before servicing.

### 1-1-2. Servicing the LED TV

1. When servicing the LED TV, Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

### 1-1-3. Fire and Shock Hazard

Before returning the LED TV to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the LED TV.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor/capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):

**WARNING** : Do not use an isolation transformer during this test.

Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

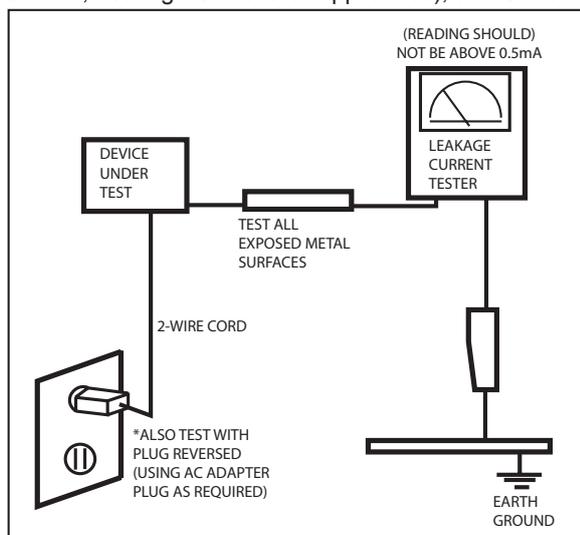


Figure 1-1. Leakage Current Test Circuit

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

### 1-1-4. Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by  $\triangle$  on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

## 1-2. Servicing Precautions

**WARNING:** An electrolytic capacitor installed with the wrong polarity might explode.

**Caution:** Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.

**Note:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

### 1-2-1 General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:
  - (a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug. The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

## 1-3. Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the LED TV.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

**Caution:** Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

## 1-4. Installation Precautions

1. For safety reasons, more than a people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.
7. When installing the product, leave enough space (0.4m) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.

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# Memo

## 2. Product specifications

### 2-1. Specifications

#### 2-1-1. Model Comparison

Model		UN32D4000ND	UN32D4010ND					
Front view	All							
Detail view	All							
	All							
Front Color	All	ToC BLK						
Dimensions W x D x H (inches)	32"	Without Stnand	30.1	1.2	18.2	30.1	1.2	18.2
		With Stand	30.1	8.8	20.8	30.1	8.8	20.8
Weight (lbs)	32"	Without Stnand	19.8			19.8		
		With Stand	15.4			15.4		
Panel Type	All	Anti Glare			Anti Glare			
Internal Memory	All	None			None			
DDR	All	384 Mbyte			384 Mbyte			
Feature	All	Media Play(MOVIE), HDD			Media Play(MOVIE), HDD			

## 2-1-2. Feature & Specifications

Model	UN32D4000ND / UN32D4010ND	
<b>Feature</b>		
<ul style="list-style-type: none"> <li>▶ Digital-TV, RF, 4-HDMI, 1-Component, 1-A/V, 1-USB2.0, D-SUB</li> <li>▶ Brightness : 400 cd/m<sup>2</sup> (Marketing spec : 400 cd/m<sup>2</sup>)</li> <li>▶ High Contrast Ratio : 4,000:1 (Marketing spec : MEGA)</li> <li>▶ Response Time : 8 ms (Marketing spec : 8 ms)</li> </ul>		
<b>Specifications</b>		
Item	Description	
LCD Panel	32 inch HD 60Hz	
Scanning Frequency	Horizontal : 60 kHz ~ 73 kHz (Automatic) Vertical : 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7M color	
Maximum resolution	Horizontal : 1366 Pixels Vertical : 768 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock rate	74.25MHz	
Active Display Horizontal/Vertical	697.7(H) x 392.3(V) mm / 28.5 (H) x 16(V) mm	
AC power voltage & Frequency	AC 110V ~ 120V, 60 Hz	
Power Consumption	Under 70 W (Under 0.3 W, Stand by)	
Dimensions Set (W x D x H)	763.6 x 222.7 x 527.1(mm) / 30.1 x 8.8 x 20.8(inches) without stand 763.6 x 29.9 x 463.1(mm) / 30.1 x 1.2 x 18.2(inches) with stand	
Weight (Set)	9(kg) / 19.8(lbs) without stand 7(kg) / 15.4(lbs) with stand	
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	ATSC & Clear QAM
	Sound	NTSC-M, Dolby Digital*
Environmental Considerations	Operating Temperature: 32°F ~ 122°F (0°C ~ 50°C) Operating Humidity: 20% ~ 90% Storage Temperature: -4°F ~ 140°F (-20°C ~ 60°C) Storage Humidity: 10% ~ 90%	
Audio Spec.	- MAX Internal Audio Output Power : Each 10W(Left/Right) - Equalizer : 5band - Output Frequency : RF : 20 Hz ~ 15.4 kHz AV/Componet/HDMI : 20 Hz ~ 20 kHz	
<b>Note:</b> Dolby Digital*, Game Mode, Film Mode, Energy Saving, Anynet*		

## 2-1-3. Specification Comparison to Old Models

※ O : application, X : non-application

Model	UD4N		UC4P	
Design				
Display Type	LED TV		LED TV	
Built-in Tuner	O		O	
Resolution	1366 X 768		1366 X 768	
LCD Panel	TFT LCD Panel 60Hz		TFT LCD Panel 60Hz	
Screen Size	32"		32"	
Picture ratio	16 : 9		16 : 9	
Dimensions (WxHxD)	32"	30.1 x 8.8 x 20.8(inches)with stand	32"	25.7 x 8.7 x 18.9(inches) with stand
		30.1 x 1.2 x 18.2(inches) without stand		25.7 x 1.2 x 16.6(inches) with stand
Weight	32"	19.80(lbs) with stand	32"	13.7(lbs) with stand
		15.40(lbs) without stand		12.1(lbs) without stand
Brightness	400 cd/m <sup>2</sup>		400 cd/m <sup>2</sup>	
Contrast Ratio	40,000:1		40,000:1	
Picture Enhancer	HyperReal Engine (X5)		HyperReal Engine (X4)	
Equalizer	5 Band		5 Band	
Auto Volume Control	O		O	
Surround Sound	Dolby Digital Plus		Dolby Digital Plus/ Plus	
Speaker Output	10 W x 10 W		10 W x 10 W	
PIP	O		O	
Double Window	X		X	
Caption	O		O	
Entertainment Mode	X		X	
Game Mode	O		O	
Energy Saving	O		O	
NETWORK	X		X	
Anynet*	O		O	
Antenna	1(Cable/Air)		1(Cable/Air)	

## 2-2. Detail Factory Option

※ If you replace the main board with new one, please change the factory option as well.

The options you must change are "Type".

### 2-2-1. UD4000

Model Name		UN32D4000ND	UN32D4010ND
Panel	Vendor	AML CMI	
	CODE	BN95-00437A BN07-00988B	
	SPEC	LTJ320AP01-V LD320AGC-C2	
SMPS	Vendor		
	CODE	BN44-00421B	
	SPEC		
1	Factory Reset	-	
2	Type	32A6AH0E 32P6AH0E	
3	Local set	US/SA_ATV	US/SA_ATV
4	Model	UD4000	UD4010
5	Tuner	SI_ATC	SI_ATC
6	Ch Table	-	-
7	Front Color	NONE	NONE

## 2-3. New Features explanation

### 2-3-1. My Contents

#### ■ Using the My Contents

Enjoy photos, music and/or movie files saved on a USB Mass Storage Class (MSC) device and/or your PC.

1. Press the **CONTENT** button to select **My Contents**.
2. Press **▲/▼** button to select desired menu (**Videos**, **Photos**, **Music**), then press the **ENTER**  button.



\* It may differ depending on the model.

#### ■ Screen Display

Move to the desired file using the **◀/▶/▲/▼** buttons and then press the **ENTER**  or **▶** (Play) button. The file is played. **My Contents** screen may differ depending on the way to enter the screen.

**Information:**  
You can ascertain the selected device name, contents mode, folder/file name, page and sorting list.

**File List Section:**  
You can confirm the files and groups that are sorted by category.

**Contents mode / Device name:**  
You can select the desired Contents mode or Device name. When **PC** is connected, you can select **PC** through PC Share Manager.

**Operation Buttons:**

-  **Yellow (Edit Mode)**; Selects the desired music. The check box is shown in the screen to check the music you want. It is only available in Music.
-  **(Jump Page)**; Move to next or previous page.
-  **Tools**; Displays the option menu.
-  **Return**; Move to the previous step.

## Videos

### 01. Playing Video

1. Press the ◀/▶/▲/▼ button to select the desired video in the file list.
2. Press the **ENTER**  button or **▶ (Play)** button.
  - The selected file name is displayed on the top with its playing time.
  - If video time information is unknown, play time and progress bar are not displayed.
  - During video playback, you can search using ◀ and ▶ button.
  - You can use **◀◀ (REW)** and **▶▶ (FF)** buttons during playback.



 In this mode, you can enjoy movie clips contained on a Game, but you cannot play the Game itself.

#### Supported Subtitle Formats

Name	File extension	Format
MPEG-4 time-based text	.txt	XML
SAMI	.smi	HTML
SubRip	.srt	string-based
SubViewer	.sub	string-based
Micro DVD	.sub or .txt	string-based

#### Supported Video Formats

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi *.mkv	AVI MKV	Divx 3.11/4.x/5.1/6.0	1920 x 1080	6 ~ 30	8	MP3/AC3 /LPCM /ADPCM /DTS Core
		XviD	1920 x 1080	6 ~ 30	8	
		H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		Motion JPEG	640 x 480	6 ~ 30	8	
*.asf	ASF	Divx 3.11/4.x/5.1/6.0	1920 x 1080	6 ~ 30	8	MP3/AC3 /LPCM /ADPCM /WMA
		XviD	1920 x 1080	6 ~ 30	8	
		H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		Motion JPEG	640 x 480	6 ~ 30	8	
*.wmv	ASF	Window Media Video v9	1920 x 1080	6 ~ 30	25	WMA
*.mp4	MP4	H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	MP3/ADPCM /AAC
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		XVID	1920 x 1080	6 ~ 30	8	
*.3gp	3GPP	H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	ADPCM/AAC /HE-AAC
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
*.vro *.vob	VRO VOB	MPEG2	1920 x 1080	24/25/30	30	AC3/MPEG /LPCM
		MPEG1	1920 x 1080	24/25/30	30	
*.mpg *.mpeg	PS	MPEG1	1920 x 1080	24/25/30	30	AC3/MPEG /LPCM/AAC
		MPEG2	1920 x 1080	24/25/30	30	
		H.264	1920 x 1080	6 ~ 30	25	
*.ts *.tp *.trp	TS	MPEG2	1920 x 1080	24/25/30	30	AC3/AAC /MP3/DD+ /HE-AAC
		H.264	1920 x 1080	6 ~ 30	25	
		VC1	1920 x 1080	6 ~ 30	25	

**02. Other Restrictions****NOTE**

- If there are problems with the contents of a codec, the codec will not be supported.
- If the information for a Container is incorrect and the file is in error, the Container will not be able to play correctly.
- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table above.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- When playing the video through network, it may not work depending on the network status.
- The videos over 10Mbps(bit rate) may be interrupted.

Video Decoder	Audio Decoder
<ul style="list-style-type: none"> <li>• Supports up to H.264, Level 4.1</li> <li>• H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.</li> <li>• XVID, MPEG4 SP, ASP:               <ul style="list-style-type: none"> <li>– Below 1280 x 720: 60 frame max</li> <li>– Above 1280 x 720: 30 frame max</li> </ul> </li> <li>• GMC is not support.</li> </ul>	<ul style="list-style-type: none"> <li>• Supports up to WMA 7, 8, 9, STD, 9 PRO</li> <li>• WMA Lossless, Voice Lossless, Voice is not supported.</li> <li>• WMA sampling rate 22050Hz mono is not supported.</li> </ul>

## ■ Music

### 01. Playing Music

1. Press the ◀/▶/▲/▼ button to select the desired Music in the file list.
2. Press the **ENTER**  button or **▶ (Play)** button.
  - You can use **◀ (REW)** and **▶ (FF)** buttons during playback.



- Only displays the files with MP3 and PCM file extension. Other file extensions are not displayed, even if they are saved on the same USB device.
- If the sound is abnormal when playing MP3 files, adjust the **Equalizer** in the **Sound** menu. (An over-modulated MP3 file may cause a sound problem.)

### 02. Playing selected music

1. Press the **C** (**Edit Mode**) button.
2. Select the desired music.
  - The check box appears to the left of the selected files.
3. Press the **TOOLS** button and select **Play Selected Contents**.
  - You can select or deselect all music pressing the **Select All/Deselect All**.

## ■ Photos

### 01. Viewing a Photo (or Slide Show)

1. Press the ◀/▶/▲/▼ button to select the desired Music in the file list.
2. Press the **ENTER**  button or  (**Play**) button.
  - When a selected photo is displayed, press the **ENTER**  button to start the slide show.
  - During the slide show, all files in the file list will be displayed in order.



- When you press the  (**Play**) button in the file list, slide show will be started immediately.
- Music files can be automatically played during the Slide Show if the **Background Music** is set to **On**.
- The **BGM Mode** cannot be changed until the BGM has finished loading.

## 2-3-2. Setting the Network Connection

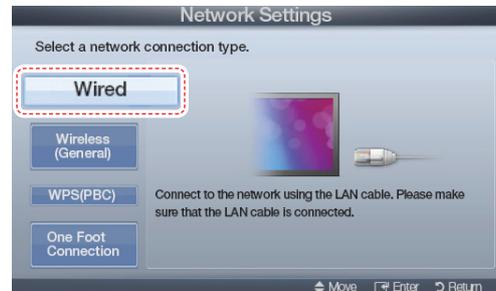
Connection Methods: You can setup the wireless network connection in four ways:

- Auto Setup (Using the Auto Network Search function)
- Manual Setup
- WPS(PBC)
- One Foot Connection

### ■ Network Settings

#### 01. Wired Network Setup

1. Go to the **Network Settings** screen.  
(MENU  → **Network** → **Network Settings** → ENTER )
2. Select **Wired**, and then press ENTER .
3. The network connection screen appears and verifies the network connection. When the connection has been verified, the "**Internet connected successfully.**" message appears.



#### 02. Wireless (General) Network Setup

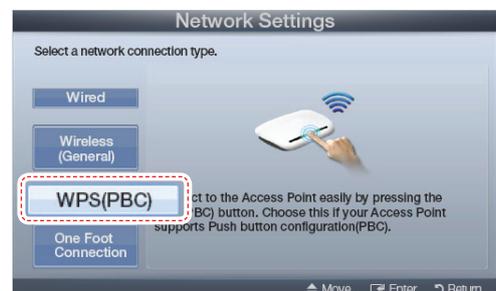
1. Go to the **Network Settings** screen.  
(MENU  → **Network** → **Network Settings** → ENTER )
2. Select **Wireless (General)**, and then press ENTER .
3. The Network function searches for available wireless networks. When done, it displays a list of the available networks.



#### 03. WPS(PBC) Network Setup

If your router has a PBC (WPS) button, follow these steps:

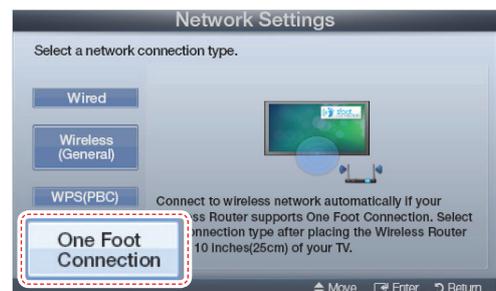
1. Go to the **Network Settings** screen.  
(MENU  → **Network** → **Network Settings** → ENTER )
2. Select **WPS(PBC)**, and then press ENTER , then press ENTER  again.
3. Press the WPS(PBC) button on your router within 2 minutes. Your TV automatically acquires all the network setting values it needs and connects to your network.
4. The network connection screen appears, and network set up is done.



#### 04. One Foot Connection Network Setup

The One Foot connection make you easy to connect samsung TV and samsung wireless router by placing samsung wireless router within 1foot(25cm) from samsung TV. If your wireless router does not support One Foot Connection, you must connect using one of the other methods.

1. Turn on the power of wireless router and TV.
2. Go to the **Network Settings** screen.  
(MENU  → **Network** → **Network Settings** → ENTER )
3. Select **One Foot Connection**, and then press ENTER , then press ENTER  again.
4. The network connection screen appears, and network set up is done.



## 2-3-3. e-Manual

### ■ How to view the e-Manual



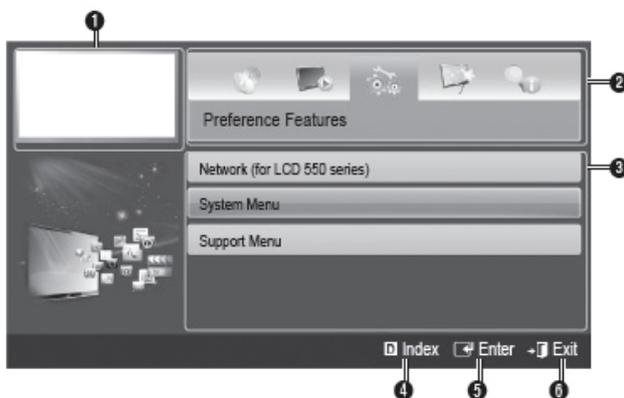
Press the E-MANUAL button on your remote. Move the cursor using up/down/right/left buttons to highlight a category, then a topic, and then press the ENTER  button. The e-Manual displays page you want to see.

 MENU  → Support → e-Manual → ENTER 

 If you want to return to e-manual, press the E-MANUAL button on remote.

 It is not available to connect Try now directly in the external input source.

### Screen Display



- 1 Currently displayed video, TV program, etc.
- 2 The category list. Press ◀ or ▶ button to select category you want.
- 3 Displays the sub-menu list. Use the arrow buttons on your remote to move the cursor. Press ENTER  button to select the sub-menu you want.
- 4  Blue (Index): Displays the index screen.
- 5  Enter: Selects a category or sub-menu.
- 6  Exit: Exit the e-Manual.

### How to toggle between an e-Manual topic and the corresponding OSD menu(s).



#### Method 1

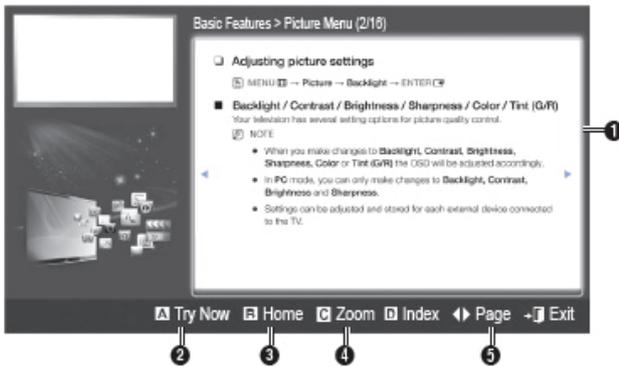
1. If you want to use the menu that corresponds to an e-Manual topic, press the red button to select Try Now.
2. To return to the e-Manual screen, press the E-MANUAL button.

#### Method 2

1. Press the ENTER  button when a topic is displayed. "Are you sure?" appears. Select Yes, and then press the ENTER  button. The OSD window appears.
2. To return to the e-Manual screen, press the E-MANUAL button.

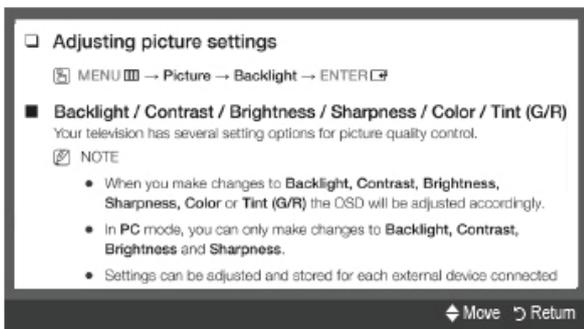
## 2. Product specifications

### Viewing the Contents



- 1 Contents Area: Contains the topic contents, if you selected a sub-menu. To move previous or next page, press the ◀ / ▶ button.
- 2 Try Now: Displays the OSD menu that corresponds to the topic. To return to the e-Manual screen, press the e-Manual button.
- 3 Home: Moves to the e-Manual home screen.
- 4 Zoom: Magnifies a screen. You can scroll through the magnified screen by using ▲ / ▼ buttons.
- 5 ◀▶ (Page): Moves to previous or next page.

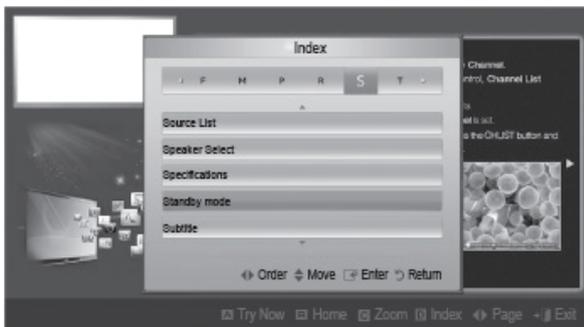
### Using the Zoom mode



Select the **Zoom**, and then press ENTER  to magnify the screen. You can scroll through the magnified screen by using the ▲ or ▼ buttons.

 To return to the screen to normal size, press the RETURN button.

### How to search for a topic on the index page

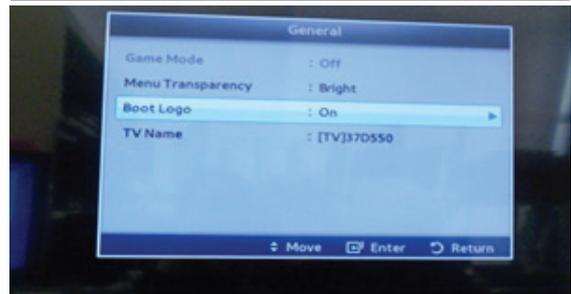


1. To search for a topic, press the left or right arrow button to select a letter, and then press ENTER . The Index displays a list of topics and keywords that begin with the letter you selected.
  2. Press the up or down arrow button to select a topic or keyword, and then press the ENTER  button.
  3. The e-Manual page with the topic appears.
-  To close the Index screen, press the RETURN button.

### 2-3-3. Boot Logo

2011 model supports Fastlogo except for start melody.

1. Displays the Samsung logo when the TV is turned on.
  - If you off the **Boot Logo** ;  
**Menu** → **System** → **General** → **Boot Logo** → **Off**.



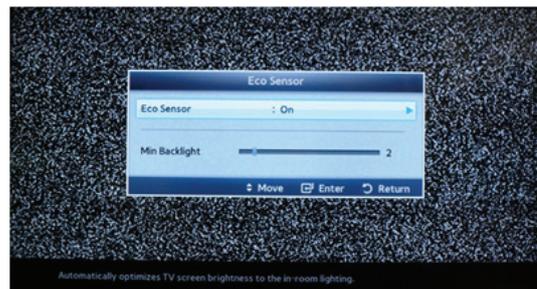
### 2-3-4. Eco sensor

\* To enhance your power savings; the

Menu → System → Eco solution → Eco Sensor



Min Backlight: When ECO sensor is On, the minimum screen brightness can be adjusted manually.



**2-4. Accessories**

Product	Description	Code. No	Remark
	Remote Control / Batteries (AAA x 2)	AA59-00463A	Samsung Electronics Service center
	Power Cord	3903-000598	
	Warranty Card / Safety Guide Manual	BP68-00263E AA68-03242L	
	Cleaning Cloth	BN63-01798B	
	Component Adapter	BN39-01154W	